145581-1
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Jennifer Dean et al.	) Group Art Unit: 1791
Serial No.:	10/749,071	)
Filed:	December 30, 2003	) Examiner: J. M. Wollschlager
For:	METHOD FOR MAKING FOG RESISTANT THERMOPLASTIC ARTICLES AND ARTICLES MADE THEREFROM	) Confirmation No. 7947

VIA ELECTRONIC FILING
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is SABIC Innovative Plastics IP B.V.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to Appellants, Appellants' legal representatives, or assignee that will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF THE CLAIMS

Claims 1, 3 – 6, 8 – 11, 13 – 15, and 17 – 21 are pending in the current application. Claims 1, 3 – 6, 8 – 11, 13 – 15, and 17 – 21 stand finally rejected. Claims 2, 7, 12, and 16 have been cancelled. No claims have been withdrawn and no claims stand objected to or are allowed. Appellants hereby appeal the final rejection of claims 1, 3 – 6, 8 – 11, 13 – 15, and 17 – 21.

IV. STATUS OF THE AMENDMENTS

No amendments have been filed subsequent to the non-final rejection dated July 14, 2009. All prior amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

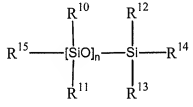
Claim 1 is directed to a method for making an fog resistant thermoplastic article that comprises blending an aromatic thermoplastic polymer and an ionic anti-fog additive to form a blend (Page 2, lines 12 – 14); molding the blend to form an aromatic thermoplastic polymer article (Page 2, lines 14 – 15); and exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article (Page 2, lines 7 – 9). The exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing (Page 3, line 28 – Page 4, line 1). The fog resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing (Page 2, lines 9 – 11).

Claim 3 is directed to the exposing being performed for greater than or equal to about 20 minutes (Page 4, line 14).

Claim 4 is directed to the exposing being performed for greater than or equal to about 45 minutes (Page 4, line 14).

Claim 13 is directed to the polysiloxane polyether copolymer comprising a backbone of a methyl-substituted siloxane, phenyl-substituted siloxane, random copolymer of methyl and phenyl substituted siloxane, block copolymer of methyl and phenyl substituted siloxane, branched polymer of methyl and phenyl substituted siloxane, or star polymer of methyl and phenyl substituted siloxane; and wherein polyether is bonded to one or more ends of the siloxane backbone, grafted onto the siloxane, or both (Page 8, lines 1 – 7).

Claim 14 is directed to the polysiloxane-polyether composition being of the formula:



wherein n is about 3 to about 5000; and R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15} are each independently hydrogen, a C_1-C_{20} alkyl group, a C_6-C_{12} aryl group, a (C_1-C_{20} alkyl)C_6-C_{12} aryl group, a (C_6-C_{12} aryl)C_1-C_{20} alkyl group, a C_1-C_{20} alkoxy, or polyether group, with the proviso that at least one of R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, or R^{15} is a polyether group (Page 8, lines 8 – 14).

Claim 15 is directed to the article being free of an anti-fog coating (Page 2, lines 1 – 4).

Claim 17 is directed to a method for making a fog resistant thermoplastic article that comprises blending a thermoplastic polymer and an ionic or non-ionic anti-fog additive to form a blend (Page 2, lines 12 – 14); molding the blend to form an thermoplastic article (Page 2, lines 14 – 15); and exposing a thermoplastic article to an aqueous environment sufficient to result in a fog resistant thermoplastic article (Page 2, lines 19 – 20). The exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing (Page 3, line 28 – Page 4, line 1). The fog resistant thermoplastic article has a greater fog resistance when compared to the thermoplastic article prior to exposing (Page 2, lines 20 – 22). The non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene

glycol) (Page 8, lines 8 – 20; Page 28, lines 6 – 9). The thermoplastic polymer comprises polycarbonate, an aromatic polycarbonate, a (co)polyestercarbonate, an aromatic (co)polyestercarbonate, blends thereof, or a combination comprising at least one of the foregoing polymers (Page 9, lines 14 – 17).

Claim 21 is directed to a method for making a fog resistant thermoplastic article that comprises blending an aromatic thermoplastic polymer and an ionic or non-ionic anti-fog additive to form a blend (Page 2, lines 12 – 14); molding the blend to form an aromatic thermoplastic polymer article (Page 2, lines 14 – 15); and exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article (Page 2, lines 7 – 9). The exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing (Page 3, line 28 – Page 4, line 1). The fog resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing (Page 2, lines 9 – 11). The non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol) (Page 8, lines 8 – 20; Page 28, lines 6 – 9). The aromatic thermoplastic polymer comprises polyphenylene ether, aromatic polyester, polyphenylene ether/styrene blend, aromatic polyamide, polyethylene terephthalate, blends thereof, or a combination comprising at least one of the foregoing polymers (Page 9, lines 14 – 17).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Whether Claims 1, 3 – 6, 8 – 11, 15, and 17 – 21 are obvious, under 35 U.S.C. § 103(a), over U.S. Patent 5,877,254 to La Casse et al. (La Casse) in view of U.S. Patent No. 3,048,263 to Sacks et al. (Sacks) and any one of U.S. Patent No. 6,225,391 to Parthasarathy et al. (Parthasarathy), U.S. Patent No. 3,433,653 to Smissen, or International Application No. WO96/25451 to Hen et al. (Hen).

B. Whether Claims 13 and 14 are obvious, under 35 U.S.C. § 103(a), over La Casse in view of Sacks and any one of Parthasarathy, Smissen, or Hen, further in view of U.S. Patent No. 3,933,407 to Tu et al. (Tu).

VII. ARGUMENT

A. CLAIMS 1, 3 – 6, 8 – 11, 15, AND 17 – 21 ARE NON-OBVIOUS OVER LA CASSE IN VIEW OF SACKS AND ANY ONE OF PARTHASARATHY, SMISSEN, OR HEN.

The Final Office Action dated July 14, 2009 (hereinafter "FOA 07/09") alleges that La Casse discloses a method of producing an anti-fog composition comprising ionic or non-ionic anti-fog additives, such as polycarbonate and polyethylene terephthalate, and various polyolefins where the composition may be coated with the thermoplastic material and further processed and molded to produce a finished article. (FOA 07/09, Page 3) With respect to Claims 17 and 21, it is alleged that La Casse discloses that non-ionic additives such as polyethylene glycol, polyethylene glycol/polypropylene copolymers and mixtures thereof may also be employed. (*Id.* at Page 5.) It is further alleged that La Casse discloses soaking the produced article in water and exposing the article to a mist of water. (*Id.* at Page 3.) It is admitted that La Casse fails to disclose "blending an aromatic thermoplastic polymer and an ionic anti-fog additive to form a blend" (Claims 1, 17, and 21). (*Id.*) It is further admitted that La Casse fails to disclose "exposing the aromatic thermoplastic article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article" (Claims 1, 17, and 21). (*Id.*)

FOA 07/09 alleges, however that Sacks discloses that in applications utilizing anti-fog agents in plastic films that both coating and incorporating methods are known for bringing the anti-fog agent and plastic together and that incorporating the anti-fog additive with the plastic is the preferred method. (*Id.*) It is further alleged that each of Parthasarathy, Smissen, and Hen disclose methods of conditioning plastics that contain anti-fog agents by exposing them to water to enhance and activate their performance by hydrolyzing the anti-fog additive. (*Id.*)

Allegedly, it would have been obvious for one skilled in the art to have incorporated the anti-fog agents of La Casse into the polymeric materials of La Casse to form a blend of polymer and anti-fogging additive instead of a coating of anti-fogging additive on the surface of the polymer as allegedly suggested by Sacks to reduce additional processing steps and to realize a longer lasting fog resistant product than is achievable from merely coating the agent on the surface of the plastic. (*Id.* at Pages 3 – 4.) FOA 07/09 alleges further that it would have been *prima facie* obvious to one skilled in the art to modify the method of La Casse and to

perform a conditioning step to enhance and activate the fog resistant agents, as allegedly suggested by each of Parthasarathy, Smissen, and Hen to provide a high quality material fully ready for its final application before being put in service. (*Id.* at Page 4.) It is further alleged that one skilled in the art would have a reasonable expectation of success when performing the incorporating and conditioning/activation steps with the plastics allegedly disclosed by La Casse since La Casse allegedly discloses polyolefin, PET, and polycarbonate films as equivalent alternatives, and since an artisan would realize the properties of the anti-fogging agents themselves exist independently of the polymers employed. (*Id.*)

Appellants firstly note, that for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, or knowledge generally available in the art at the time of the invention, must provide some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combine references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). "A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.,* 127 S.Ct. 1727, 1741 (2007). To find obviousness, the Examiner must "identify a reason that would have prompted a person of ordinary skill in the art in the relevant field to combine the elements in the way the claimed new invention does." *Id.*

Claims 1, 17, and 21 are directed to blending an aromatic thermoplastic polymer and an ionic or non-ionic anti-fog additive, molding the blend to form a thermoplastic article, and exposing the thermoplastic article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic article. The fog resistant thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing. (Claims 1, 17, and 21) Appellants address the issue of forming an aromatic thermoplastic polymer with anti-fog properties without requiring an anti-fog coating to be applied to the surface of the article. As explained in the Background,

> While these additives are known to be surface active and impart anti-fog properties to polyethylene and poly(vinyl chloride), they are unsuitable for polycarbonate and other aromatic thermoplastic polymers. These additives suffer from low thermal stability or are incompatible with the resin thereby preventing them from being effective anti-fog additives for aromatic thermoplastic polymers, especially polycarbonate.

(Page 1) As would be understood by an artisan, merely because a material provides anti-fog properties as a coating, does not mean that the material will provide anti-fog properties as a blend. This is at least supported in Appellants examples. As is shown and explained, many materials exhibited anti-fog properties as a coating, but once blended with an aromatic thermoplastic polymer, e.g., polycarbonate, many materials did not continue to exhibit sufficient the same anti-fog properties. For examples, Samples 1, 2, 4, and 5 exhibited a fog free time of greater than 60 seconds as a coating. When blended with polycarbonate, these same additives exhibited a fog free time of less than 5 seconds. As is clear from the Examples, it is not obvious that an anti-fog additive can be blended with an aromatic thermoplastic polymer to attain an anti-fog article.

As is further taught in the Examples, and claimed, it was unexpectedly discovered that conditioning the articles comprising the blend of the aromatic thermoplastic polymer and the anti-fog additive enhanced the anti-fog performance, substantially and unexpectedly. For example, anti-fog additive of Sample 14, exhibited a fog-free time of greater than 60 seconds as a coating (Sample 1), but, when blended with the aromatic thermoplastic polymer, exhibited a fog-free time of only 2 seconds. Once the article was conditioned, it exhibited a fog-free time of 20 seconds. Similarly, the anti-fog additive of Samples 15 and 17, exhibited a fog-free time of greater than 60 seconds as a coating (Samples 2 and 5, respectively), but, when blended with the aromatic thermoplastic polymer, exhibited a fog-free time of only 1 second and 3 seconds, respectively. Once the article was conditioned, however, they unexpectedly again exhibited fog-free times of greater than 60 seconds.

La Casse is focused upon providing a scratch-resistant anti-fog coating. They address the problem in the art that

> None of the above-mentioned patents suggest or describe that their compositions may provide permanent fog resistance properties, i.e. fog resistant properties which last after repeated washings or extended soaking in water, nor do they teach or suggest that the effectiveness of their coatings can last more than a few hours of use.

(Col. 2, lines 33 – 39) They state that "a need exists for a polyurethane composition which when cured provides enhanced chemical resistance and scratch resistance in addition to long lasting, permanent anti-fog properties." (Col. 2, lines 57 – 59)

La Casse explains that

> The present compositions can be applied as a coating to a substrate surface and are sufficiently flexible to withstand further processing of the substrate, such as molding or shaping, without loss of its properties. A variety of substrates may be employed. Among the preferred substrate materials include polycarbonate, acrylic, polyvinylchloride, polybisallyl carbonate, polyethylene terephthalate and polyethylene naphthenate transparent plastics. Various polyolefins, fluorinated polymers, metals and glass may also be used with appropriate pretreatments.

(Col. 3, lines 49 – 58) It should be noted, La Casse in no way states or infers that the possible substrate materials are "equivalent alternatives". La Casse merely states that the material can be used as substrates. There is no suggestion as to the properties of the substrates or the resulting articles or that they are in any way equivalent.

La Casse's whole disclosure is directed to a particular anti-fog composition that, as a ***coating***, allegedly produces an article that has enhanced scratch-resistance, chemical resistance, and long lasting anti-fog properties. There is no teaching, suggestion, motivation, or reason to believe that such results might be attainable or even possible if an anti-fog additive was mixed into an aromatic thermoplastic polymer. Logically, an artisan would assume that if a coating intended to provide scratch-resistance, chemical resistance, and anti-fog properties, were blended with the material intended as the substrate, the properties would be lost.

Since it is not logical to combine the anti-fog coating of La Casse with the substrate thereof because the intended properties would seemingly be lost, Sacks is relied upon to allegedly disclose incorporating an anti-fog agent in the plastic. Sacks is generally directed to the prevention of fogging on polyolefin surfaces. (Col. 1, lines 9 – 10)

Sacks explains that it has been disclosed to make a viewing glass, (e.g., made of polyvinyl chloride plastic) with a single layer of transparent material and a wetting agent which is admixed with a synthetic material, wherein the wetting agent constitutes the plasticizer for the synthetic material. (Col. 1, lines 26 – 43) The present application explains in the Background that: "The use of anti-fog additives for certain thermoplastics is known, for example, there are known anti-fog additives for polyethylene and poly(vinyl chloride)." (Paragraph [0004]) Sacks does not disclose or suggest that aromatic thermoplastic polymers can be blended to form an anti-fog article. Additionally, Sacks does not address improved scratch resistance or chemical resistance that are of concern in La Casse. Actually, Sacks

discusses the use of the polyolefin films to package fresh meats. (Col. 1, lines 24 – 30) Sacks notes that they do not want to coat the anti-fog coating onto the film because it may be wiped or washed off. (Col. 3, lines 31 – 33) La Casse addresses the removal of the anti-fog coating by disclosing a particular coating that has improved scratch resistance, chemical resistance, and "permanent fog resistant properties, i.e., fog resistant properties which last after repeated washings or extended coatings in water". (La Casse, Col. 2, lines 33 0 39) There is no motivation or prompting for one of ordinary skill in the art to ignore the teachings of La Casse to coat a substrate with their anti-fog coating and to mix the anti-fog coating into the substrate. Beyond the above failures of Sacks, Sacks also fails to disclose or suggest the presently claimed conditioning of the article and fails to disclose or suggest the unexpected results attained by the Appellants. Hence, Parthasarathy, Smissen, and Hen are relied upon to allegedly disclose conditioning of plastics that contain anti-fog agents. (FOA 07/09, Page 3)

Parthasarathy is generally directed to producing a polyolefin film having anti-fog properties by adding an alkyl(polyether)siloxane compound to a composition comprising a polyolefin before forming a film. (Col. 2, lines 18 – 23) Smissen discloses an antifogging viewing glass made of transparent cellulose acetate, cellulose butyrate, or polyvinyl chloride plastic containing a vinyl sulfonic acid ester, which when contacted with water, is hydrolyzed and becomes a wetting agent. (Abstract) Finally, Hen discloses anti-fog packaging film made using polyether polyamide block copolymers. (Abstract) Hen discloses that exposure "to a polar medium such as liquid or gaseous water improves the *consistency* of the anti-fog behavior. (Abstract, *emphasis* added)

It is also noted that Hen further fails to cure the deficiencies posed by the references, as Hen is directed to a film having inherent anti-fog properties due to the use of a polyether polyamide block copolymer. Hence, Hen does not lead one skilled in the art to use any kind of anti-fog additive and blend that anti-fog additive with an aromatic thermoplastic polymer to form a blend that is prepared into an article that is later provided with improved anti-fog properties by exposure to an aqueous environment. Furthermore, Hen at least fails to disclose "exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic

thermoplastic polymer article" or "wherein the fog resistant thermoplastic polymer article has a greater fog resistant when compared to the aromatic thermoplastic polymer article prior to exposing." (Claims 1, 17, and 21) Hen merely discloses that exposure of their film (that is, a film that does not include an anti-fog additive), to a polar medium "improves the consistency of the anti-fog behavior". (Page 8, lines 16 – 20) Thus, Hen merely discloses that a particular film comprising **inherent** anti-fog properties has more consistent anti-fog properties after exposure to a polar medium. Hen does not address an aromatic thermoplastic polymer blended with an anti-fog additive. Thus, since as discussed, no motivation exists to combine the references, since, even if combined there is no indication the combination would function as intended by La Casse, and since elements of the claims are still missing even if the references are combined, the claims are non-obvious.

The dependent claims add further patentable distinction. For example, with respect to Claims 3 and 4, FOA 07/09 alleges that La Casse discloses exposure for extended periods of time during testing and that Parthasarathy discloses that activation depends on time, temperature, and humidity. (FOA 07/09, Page 4) However, Claims 3 and 4 are directed to the exposing being performed for greater than or equal to about 20 or about 45 minutes, respectively. In Claim 1, the molded blend is exposed to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article and the fog resistant thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing. Neither of these references discloses the exposure time as presently claimed.

With respect to Claim 15, which is directed to the fog resistant aromatic thermoplastic polymer article being free of an anti-fog coating, FOA 07/09 alleges that Sacks describes incorporating the additive instead of employing it as a coating. However, as discussed in detail above, one skilled in the art would not combine La Casse and Sacks, additionally, there is no teaching to have no anti-fog coating, even if these references are combine; La Casse is directed to an anti-fog coating. Claim 15 is non-obvious.

In view of the foregoing, it is urged that the Final Rejection of Claims 1, 3 – 6, 8 – 11, 15, and 17 – 21 be overturned and the claims allowed. The final rejection is in error and should be reversed.

B. CLAIMS 13 AND 14 ARE NON-OBVIOUS OVER LA CASSE IN VIEW OF SACKS AND ANY ONE OF PARTHASARATHY, SMISSEN, OR HEN, FURTHER IN VIEW OF TU.

FOA 07/09 alleges that the combination of references teaches the method of Claim 21 as set forth above. (FOA 0709, Page 7) FOA 07/09 admits, however, that La Casse fails to disclose the anti-fog additive as in Claims 13 and 14. (*Id.*) Tu is relied upon to allegedly cure this deficiency. Specifically, it is alleged that Tu discloses anti-fogging additives meeting Claims 13 and 14. (*Id.*) Allegedly, it would have been *prima facie* obvious to one skilled in the art to employ the anti-fog agent of Tu in the method allegedly disclosed by La Casse, since Tu allegedly suggests "the material is an alternative means of accomplishing fog resistance with synergist effects". (*Id.*)

As discussed in detail above, La Casse fails to disclose or suggest

- blending an aromatic thermoplastic polymer and an ionic anti-fog additive to form a blend,
- molding the blend to form an aromatic thermoplastic polymer article,
- exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article,
- wherein the exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing, or
- wherein the fog resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing.

(Claim 21) La Casse further fails to disclose

- wherein the non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol); and
-wherein the aromatic thermoplastic polymer comprises polyphenylene ether, aromatic polyester, polyphenylene ether/styrene blend, aromatic polyamide, polyethylene terephthalate, blends thereof, or a combination comprising at least one of the foregoing polymers.

(Claim 21) In other words, La Casse is deficient in disclosing the majority of Claim 21 as well as the specific polysiloxane polyether copolymers disclosed in Claims 13 and 14. As discussed above, La Casse fails to teach or suggest blending an anti-fog additive with an aromatic thermoplastic and then molding the blend to form an anti-fog article and La Casse, in view of

Sacks, Parthasarathy, Smissen, and/or Hen, fails to suggest to one skilled in the art the unexpected results attained by Appellants by exposing the article formed from the blend to an aqueous environment.

It is first noted that there is no prompting or motivation to employ the anti-fog agent of Tu in the method of La Casse. La Casse's disclosure is based upon their specific anti-fog composition. They are trying to address a problem that they perceive with existing compositions. They discuss their composition as the solution to the problem with known compositions, namely, La Casse's composition allegedly "provides enhanced chemical resistance and scratch resistance in addition to long lasting, permanent anti-fog properties". (Col. 2, lines 57 – 59) An artisan reading the references as a whole would not be prompted or motivated by Tu to totally ignore the whole teaching of La Casse in order to replace the essence of La Casse, their anti-fog coating, with the composition of Tu.

It is further noted that Tu discloses an anti-fog composition comprising the combination of (1) hydrophilic acrylate or methacrylate polymer, e.g., hydroxyethyl methoacrylate polymer and (2) a siloxane-oxyalkylene block copolymer. (Col. 1, ll. 9-12) Tu discloses applying the anti-fogging composition to glass or plastic surfaces which are normally fogging. (Abstract) Tu does not disclose a method for making a fog resistant thermoplastic article comprising *blending* an aromatic thermoplastic polymer and an ionic or a non-ionic anti-fog additive to form a blend; *molding* the blend to form an aromatic thermoplastic polymer article; and *exposing* the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article, wherein the exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing. In other words, Tu fails to cure the many deficiencies of the other references of record.

Tu, as indicated at Col. 10, ll. 39-67, Col. 11, ll. 1-67 and Tables I, II, and III discloses adding organosiloxane-oxyalkylene block copolymer to hydroxyalkyl acrylate or methacrylate polymer to form a solution and then coating a glass or plastic surface which is normally foggy with the solution. Thus, the plastic articles disclosed by Tu are not formed by blending an aromatic thermoplastic polymer and an ionic or a non-ionic anti-fog additive to form a blend and then molding the blend to form an aromatic thermoplastic polymer article. Rather, the plastic articles are made by *coating* the article with a solution that contains organosiloxane-

oxyalkylene block copolymer. Furthermore, the coating solution of Tu does not contain an aromatic thermoplastic polymer. Nor does Tu disclose blending an aromatic thermoplastic polymer and an ionic or a non-ionic anti-fog additive to form a blend; molding the blend to form an aromatic thermoplastic polymer article; and exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article. Therefore, even combined with Tu, La Casse fails to render the present claims obvious.

La Casse, alone or in view of the references of record fails to obviate the present claims. Furthermore, these references fail to teach the unexpected results obtained by Appellants. Claims 13 and 14 are non-obvious. In view of the foregoing, it is urged that the Final Rejection of Claims 13 and 14 be overturned and the claims allowed. The final rejection is in error and should be reversed.

In the event the Examiner has any queries regarding the submitted arguments, the undersigned respectfully requests the courtesy of a telephone conference to discuss any matters in need of attention.

If there are any additional charges with respect to this Appeal Brief, please charge them to Deposit Account No. 50-4776.

Respectfully submitted,

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APPENDIX A

1. (Previously Presented) A method for making a fog resistant thermoplastic article, comprising:

blending an aromatic thermoplastic polymer and an ionic anti-fog additive to form a blend;

molding the blend to form an aromatic thermoplastic polymer article; and

exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article,

wherein the exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing;

wherein the fog resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing.

3. (Original) The method of claim 1, wherein the exposing is performed for greater than or equal to about 20 minutes.

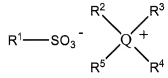
4. (Original) The method of claim 1, wherein the exposing is performed for greater than or equal to about 45 minutes.

5. (Original) The method of claim 1, wherein the aromatic thermoplastic polymer article comprises a composition comprising aromatic polycarbonate, polyphenylene ether, aromatic polyester, polyphenylene ether/styrene blend, aromatic polyamide, polyethylene terephthalate, blends thereof, or a combination comprising at least one of the foregoing polymers.

6. (Previously Presented) The method of claim 1, wherein the aromatic thermoplastic polymer article comprises a composition comprising polycarbonate, an aromatic polycarbonate, a (co)polyestercarbonate, an aromatic (co)polyestercarbonate, blends thereof, or a combination comprising at least one of the foregoing polymers.

8. (Previously Presented) The method of claim 1, wherein the ionic anti-fog additive is a sulfonic acid salt.

9. (Original) The method of claim 8, wherein the sulfonic acid salt is according to the formula:



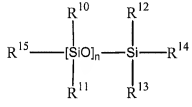
wherein Q is nitrogen or phosphorus; R^1 is a C_1-C_{40} alkyl group, a C_1-C_{40} haloalkyl group, a C_6-C_{40} aryl group, a (C_6-C_{12} aryl)C_1-C_{40} alkyl group, or a (C_1-C_{40} alkyl)C_6-C_{12} aryl group; and R^2, R^3, R^4 and R^5 are each independently hydrogen, a C_1-C_{20} alkyl group, a C_1-C_{20} hydroxyalkyl group, or a C_6-C_{12} aryl group.

10. (Original) The method of claim 8, wherein the sulfonic acid salt is a tetraalkyl ammonium salt of a sulfonic acid, a trialkyl(hydroxyalkyl) ammonium salt of a sulfonic acid, tetraalkyl phosphonium salt of a sulfonic acid, a trialkyl(hydroxyalkyl) phosphonum salt of a sulfonic acid, or combinations comprising at least one of the foregoing sulfonic acid salts.

11. (Previously Presented) The method of claim 21, wherein the ionic or non-ionic anti-fog additive is present in an amount of about 0.1 to about 10 weight percent based on the total weight of the composition.

13. (Previously Presented) The method of claim 21, wherein the polysiloxane-polyether copolymer comprises a backbone of a methyl-substituted siloxane, phenyl-substituted siloxane, random copolymer of methyl and phenyl substituted siloxane, block copolymer of methyl and phenyl substituted siloxane, branched polymer of methyl and phenyl substituted siloxane, or star polymer of methyl and phenyl substituted siloxane; and wherein polyether is bonded to one or more ends of the siloxane backbone, grafted onto the siloxane, or both.

14. (Previously Presented) The method of claim 21, wherein the polysiloxane-polyether copolymer is according to the formula:



wherein n is about 3 to about 5000; and R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, R^{15} are each independently hydrogen, a C_1-C_{20} alkyl group, a C_6-C_{12} aryl group, a (C_1-C_{20} alkyl)C_6-C_{12} aryl group, a (C_6-C_{12} aryl)C_1-C_{20} alkyl group, a C_1-C_{20} alkoxy, or polyether group, with the proviso that at least one of R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, or R^{15} is a polyether group.

15. (Original) The method of claim 1, wherein the fog resistant aromatic thermoplastic polymer article is free of an anti-fog coating.

17. (Previously Presented) A method for making a fog resistant thermoplastic article, comprising:

blending a thermoplastic polymer and an ionic or a non-ionic anti-fog additive to form a blend;

molding the blend to form an thermoplastic article; and

exposing a thermoplastic article to an aqueous environment sufficient to result in a fog resistant thermoplastic article,

wherein the exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing; and

wherein the fog resistant thermoplastic article has a greater fog resistance when compared to the thermoplastic article prior to exposing;

wherein the non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol); and

wherein the thermoplastic polymer comprises polycarbonate, an aromatic polycarbonate, a (co)polyestercarbonate, an aromatic (co)polyestercarbonate, blends thereof, or a combination comprising at least one of the foregoing polymers.

18. (Original) A fog resistant article prepared from the method of claim 1.

19. (Previously Presented) A fog resistant article prepared from the method of claim 21.

20. (Original) A fog resistant article prepared from the method of claim 17.

21. (Previously Presented) A method for making a fog resistant thermoplastic article, comprising:

blending an aromatic thermoplastic polymer and an ionic or non-ionic anti-fog additive to form a blend;

molding the blend to form an aromatic thermoplastic polymer article; and

exposing the aromatic thermoplastic polymer article to an aqueous environment sufficient to result in a fog resistant aromatic thermoplastic polymer article,

wherein the exposing comprises exposing to steam, immersing in water, spraying with water, misting with water, or combinations comprising at least one of the foregoing; and

wherein the fog resistant aromatic thermoplastic polymer article has a greater fog resistance when compared to the aromatic thermoplastic polymer article prior to exposing;

wherein the non-ionic anti-fog additive is a polysiloxane-polyether copolymer, a poly(propylene glycol)-poly(ethylene glycol)-poly(propylene glycol), or a poly(ethylene glycol)-poly(propylene glycol)-poly(ethylene glycol); and

wherein the aromatic thermoplastic polymer comprises polyphenylene ether, aromatic polyester, polyphenylene ether/styrene blend, aromatic polyamide, polyethylene terephthalate, blends thereof, or a combination comprising at least one of the foregoing polymers.

IX. EVIDENCE APPENDIX

There is no evidence submitted pursuant to 37 C.F.R. §1.130, 37 C.F.R. §1.131, or 37 C.F.R. §1.132 or any other evidence entered by the Examiner and relied upon by the Appellant in this appeal, known to the Appellants, Appellants' legal representatives, or assignee.

[NONE]

X. RELATED PROCEEDING APPENDIX

There are no related appeals or interferences known to Appellants, Appellants' legal representatives, or assignee that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.